

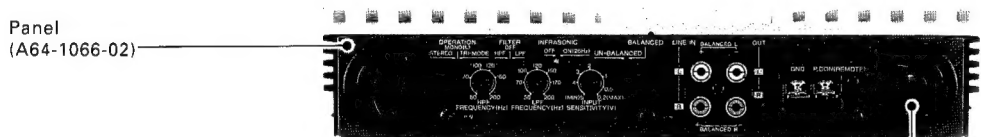
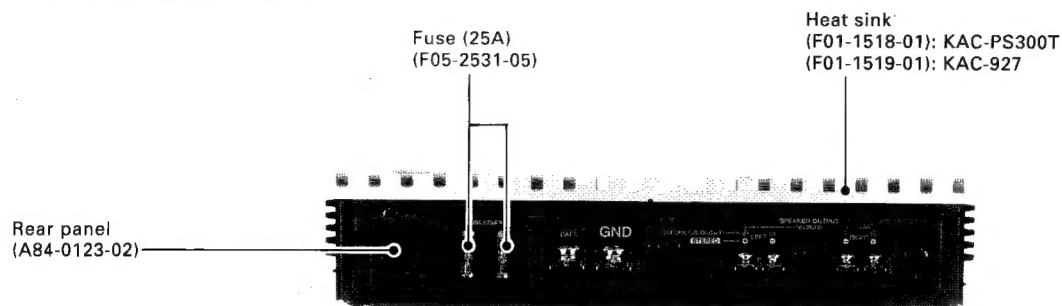
KAC-PS300T/927

SERVICE MANUAL

KENWOOD

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B51-7137-00 (MC) 3620

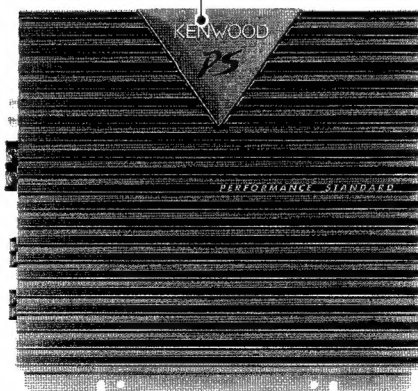
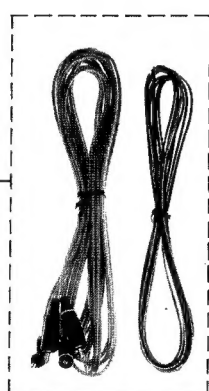
Photo is KAC-PS300T



Audio cord
(E30-4067-05): KAC-PS300T
*M type only

Dressing Panel
(A21-2361-03): KAC-PS300T
(A21-2362-03): KAC-927

Escutcheon
(B07-2093-03)



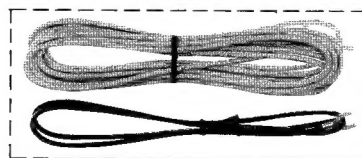
Accessory
(W01-0746-05): KAC-PS300T
*E,M type only



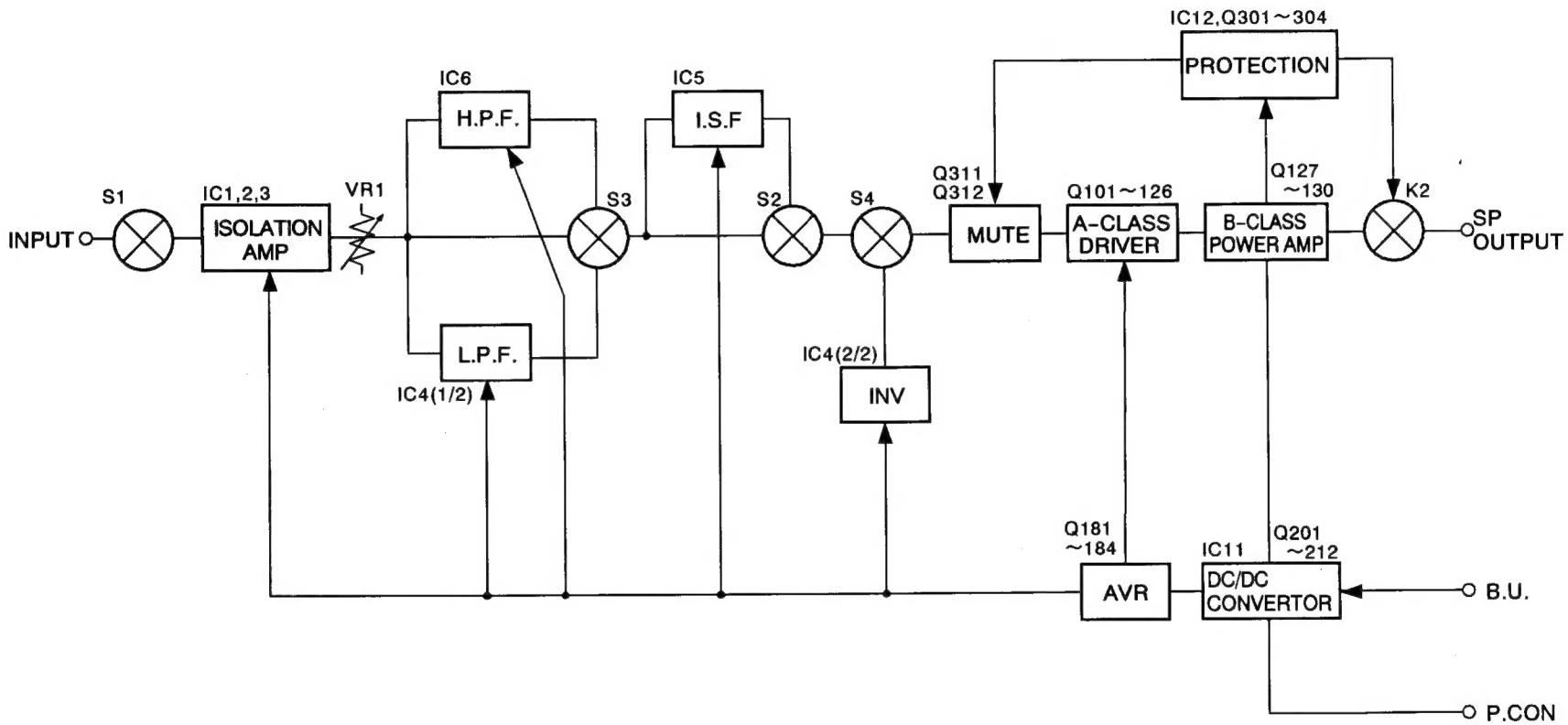
Screw set
(N99-1577-15)



Accessory
(W01-0747-05)



DC cord
(E30-4323-15): KAS-PS300T
*E,M type only



KAC-PS300T/927

CIRCUIT DESCRIPTION

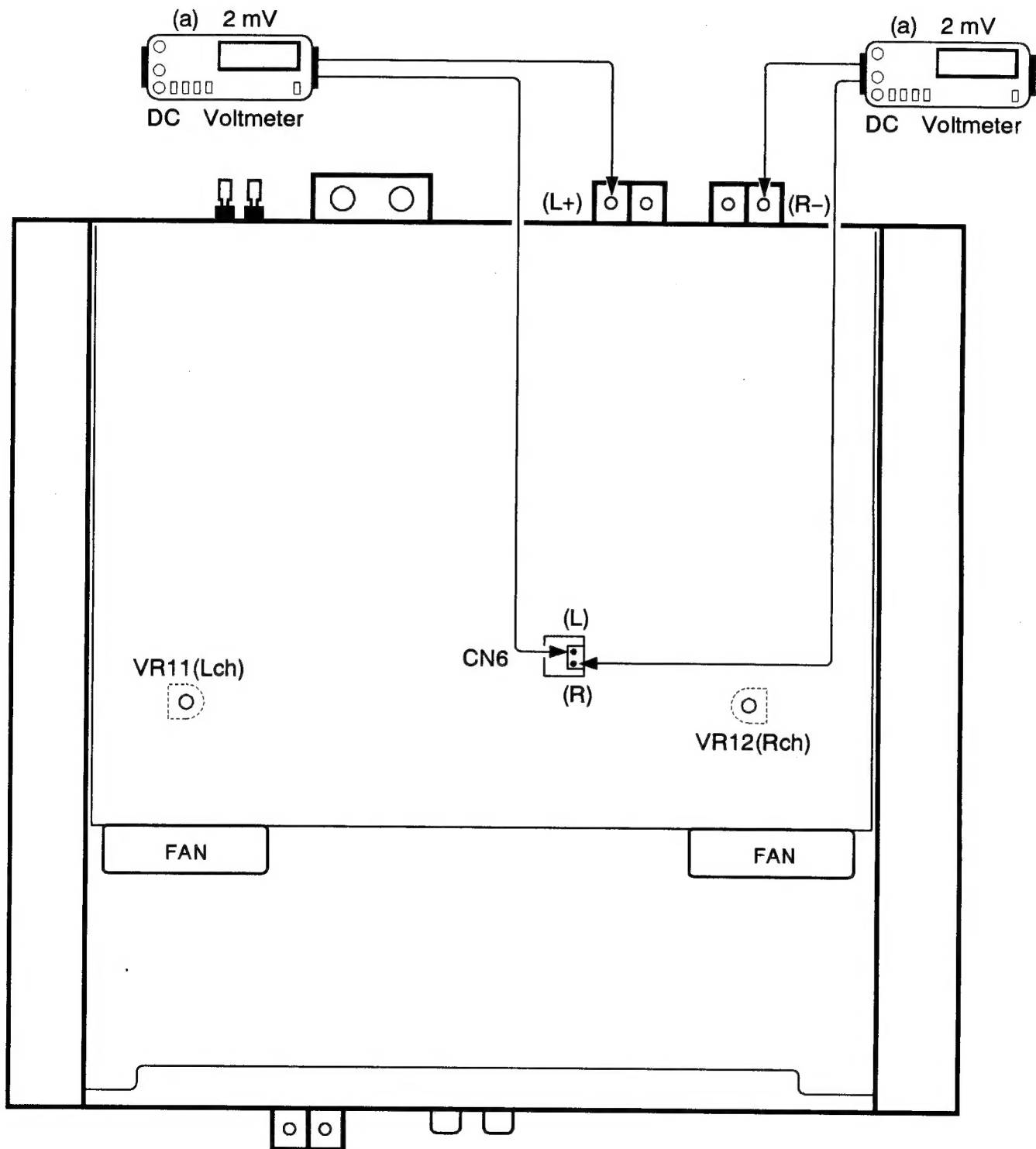
AUDIO UNIT (X09-5200-10)

Component	Component Name	Application / Functions	Operation/Condition/Compatibility
IC1 - 3	NJM5532D	Isolation AMP	Isolate the vehicle noise penetrating in the amplifier input
IC4	NJM4565D	L.P.F inverter	Inverter for L.P.F and bridge
IC5	NJM4565D	I.S.F	Infra-Sonic Filter (for cutting unnecessary low frequencies)
IC6	NJM4565D	H.P.F	
IC11	UPC494C	Switching regulator	Oscillator for DC/DC converter
IC12	UPC1237HA	Protection IC	Detection of excessive load, DC offset and P-con
Q1 , 2	2SA1561	LED driver	Drives the illumination LEDs
Q5	2SC3940A(R,S)	Fan drive	Transistor for driving the fan
Q7	2SC945(A)(Q,P)	P-con detection	Transistor for detecting the P-con voltage
Q8	2SC945(A)(Q,P)	Over-voltage detection	Detects excessive voltage and turns the AMP off
Q101 - 104	2SC945(A)(Q,P)	Input differential	
Q105 - 108	2SA992(F,E)	2nd-stage differential AMP	
Q109 - 112	2SC2631(Q,R)	3rd-stage differential AMP	
Q113 , 114	2SC2631(Q,R)	Cascade stage	
Q115 , 116	2SA1123(Q,R)	Current mirror	
Q117 , 118	2SC2590(Q,R)	Temperature compensation	
Q119 - 122	2SC2235	Power AMP driver	
Q123 - 126	2SA765		
Q181 , 183	2SC3940A(R,S)	AVR	±20V constant voltage
Q182 , 184	2SA1534A(R,S)		
Q127 , 128	2SC4886*5	Power stage	
Q129 , 130	2SA1860*5		
Q201 - 208	IRFIZ48N	Switching power stage	
Q209 , 210	2SC945(A)(Q,P)	Switching driver	Drives the IC11 switching signal
Q211 , 212	2SA733(A)(Q,P)		
Q301 , 302	2SC1845(F,E)	Current detection	Detects excessive current and drives Q304
Q303	2SA992(F,E)	Relay driver	Detects ON/OFF at IC12 pin-6 and drives the relay
Q304	2SA992(F,E)	IC12 pin-1 driver	Detects ON/OFF of Q301 and Q302, drives IC12 pin-1
Q306	2SA1534A(R,S)	Power switch	Supplies power to IC11
Q308	DTC124ESA	Muting driver	Detects the voltage at IC12 pin-6 and turns Q311 and Q312 ON/OFF
Q309	DTA124ESA		
Q311 , 312	2SC945(A)(Q,P)	Input muting	Operates more quickly than the amplifier ON/OFF to protect the relay contacts

KAC-PS300T/927

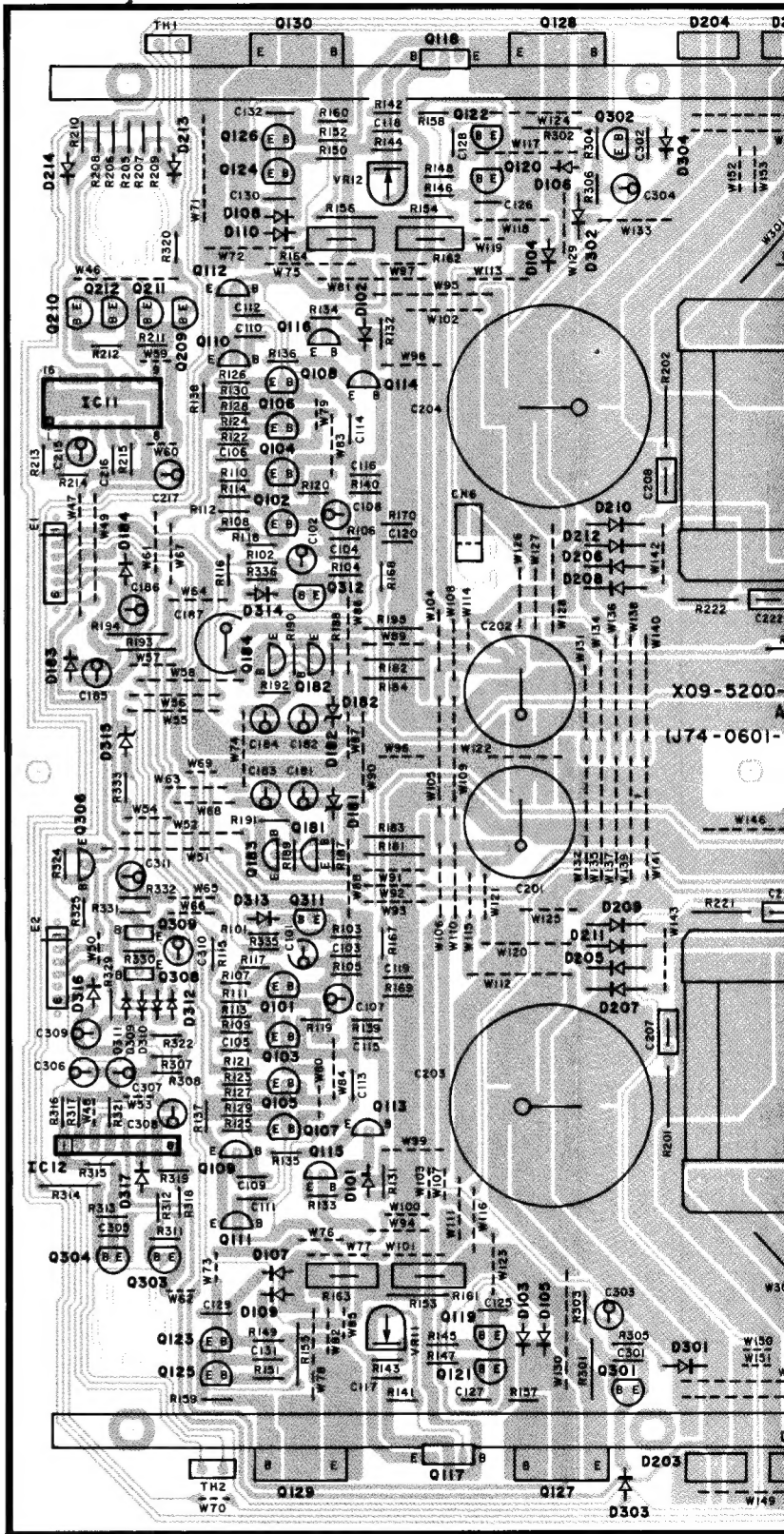
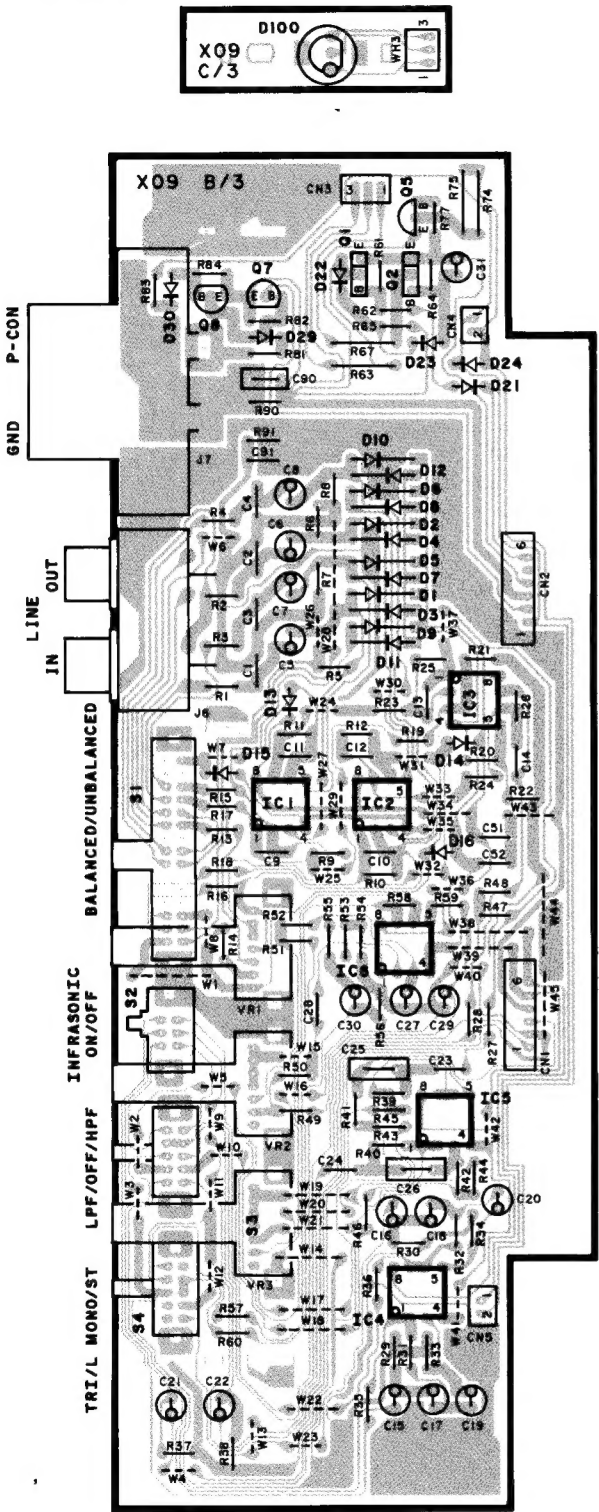
ADJUSTMENT

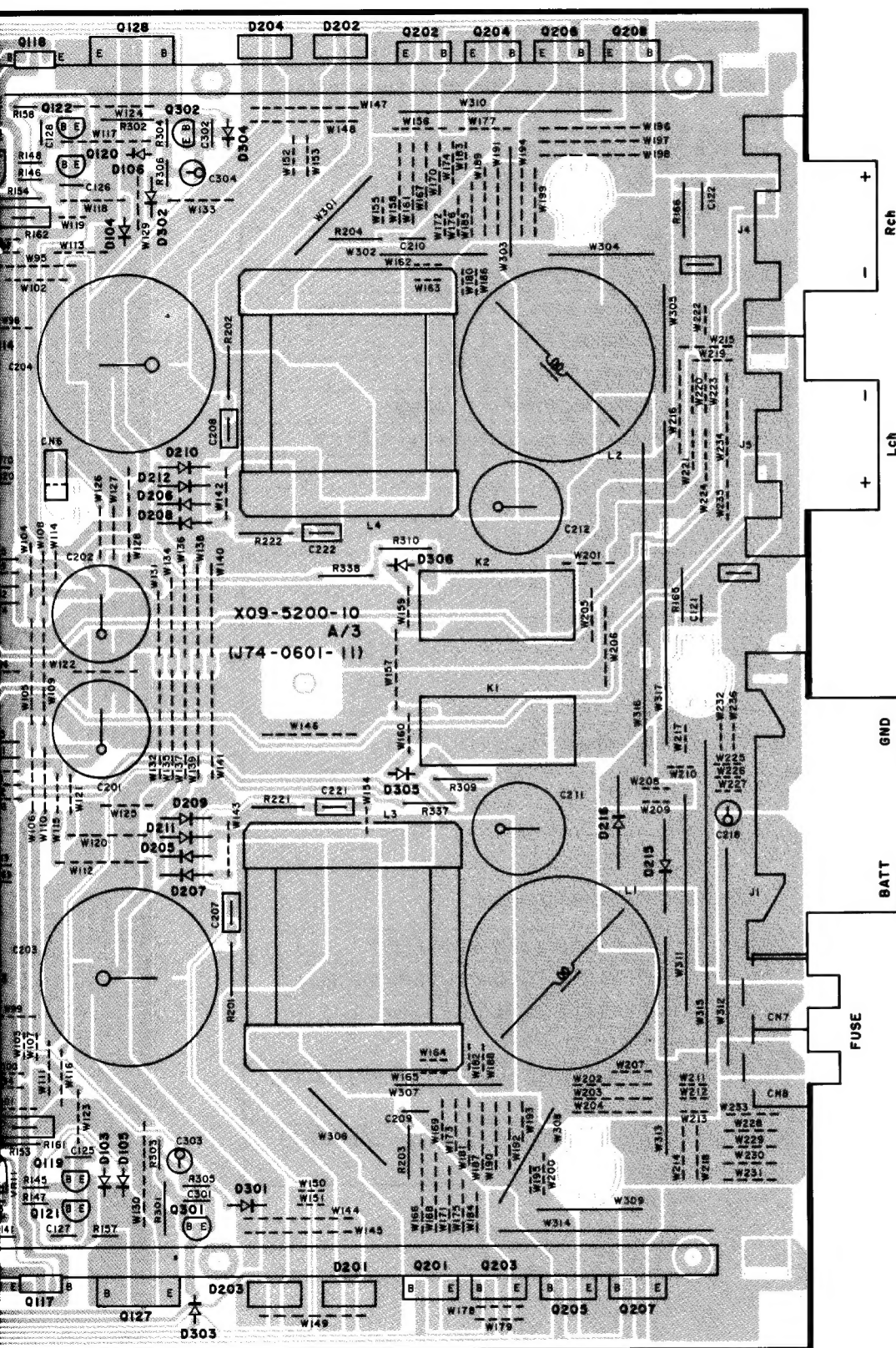
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER (RECEIVER)	ALIGNMENT POINTS	ALIGN FOR	FIG.
Connect a cassette receiver or other.							
1	IDLE CURRENT	—	Connect a DC voltmeter to CN6(L,R) and SP-OUT(L,R).	Volume : 0	VR11(L) VR12(R)	After sufficient aging adjust to 2mV	(a)



PC BOARD (Component side view)

AUDIO UNIT (X09-5200-10)



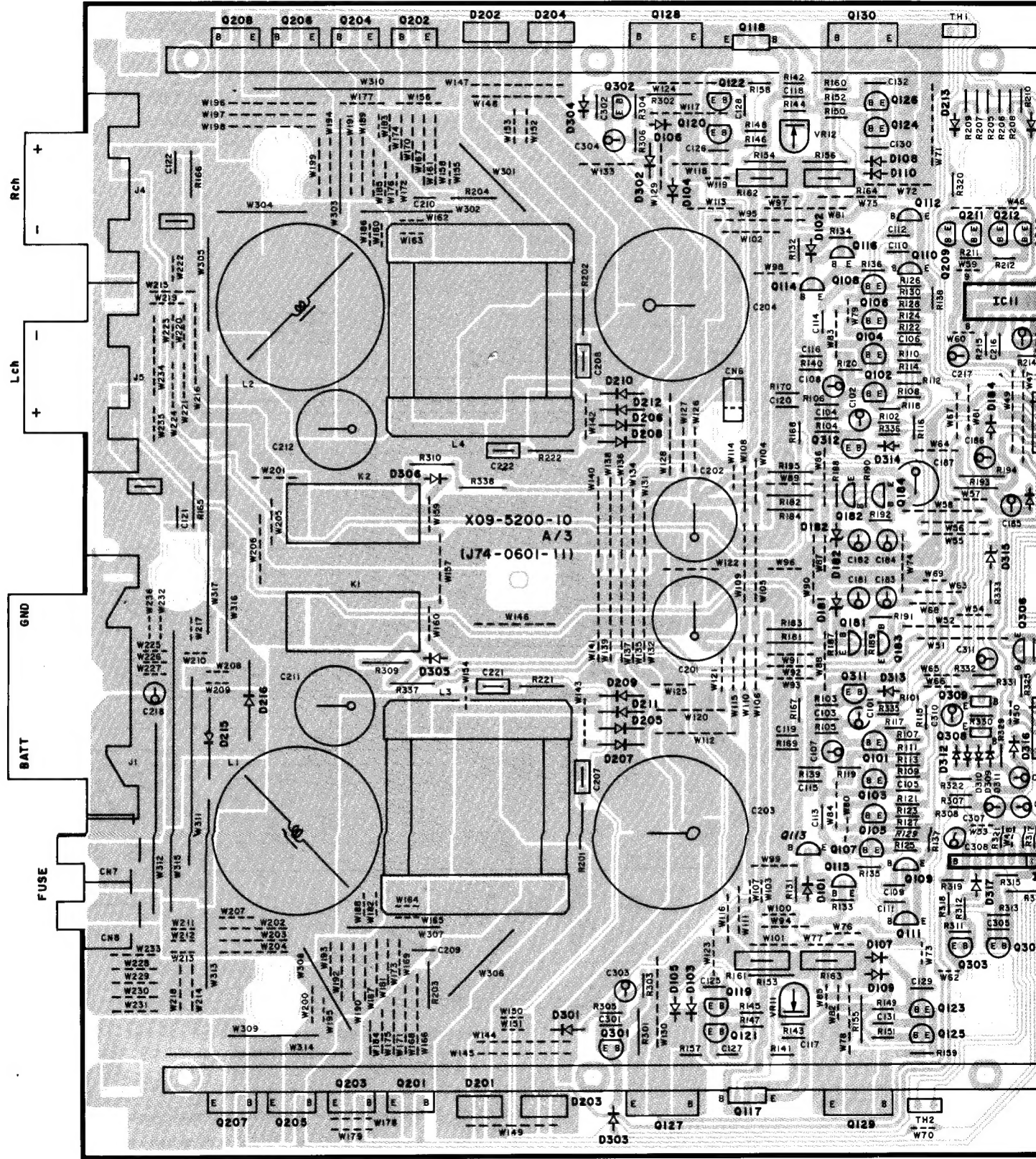


Ref No.	Adress	Ref No.	Adress
IC1	4B	Q122	2E
IC2	4B	Q123	6D
IC3	4C	Q124	2D
IC4	6C	Q125	6D
IC5	5C	Q126	2D
IC6	4B	Q127	6E
IC11	3D	Q128	1E
IC12	5D	Q129	6D
Q1	2B	Q130	1D
Q2	2B	Q181	4D
Q5	2B	Q182	3D
Q7	2B	Q183	4D
Q8	2B	Q184	3D
Q101	5D	Q201	6F
Q102	3D	Q202	2F
Q103	5D	Q203	6F
Q104	3D	Q204	2F
Q105	5D	Q205	6G
Q106	3D	Q206	2G
Q107	5D	Q207	6G
Q108	3D	Q208	2G
Q109	5D	Q209	2D
Q110	2D	Q210	2C
Q111	5D	Q211	2D
Q112	2D	Q212	2D
Q113	5D	Q301	6E
Q114	2D	Q302	6D
Q115	5D	Q303	6D
Q116	2D	Q304	6D
Q117	6E	Q306	4D
Q118	1E	Q308	5D
Q119	6E	Q309	4D
Q120	2E	Q311	4D
Q121	6E	Q312	3D

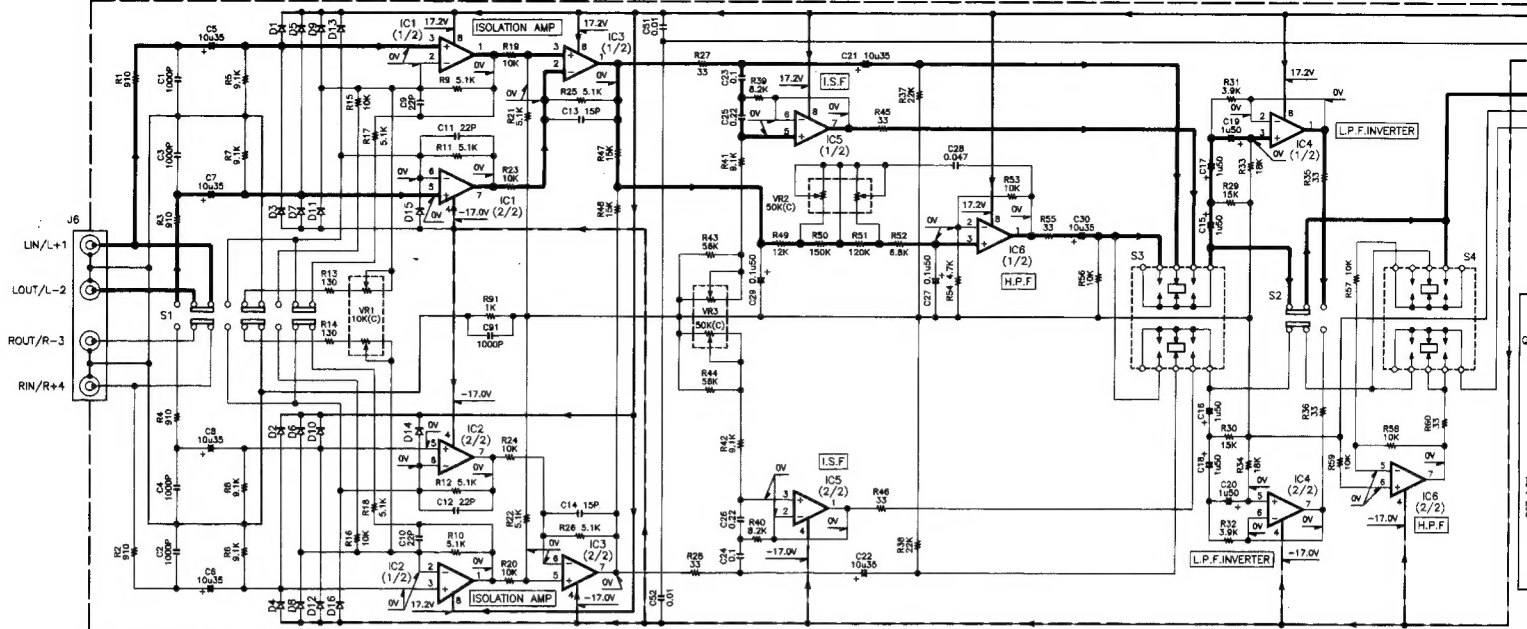
Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil side view)

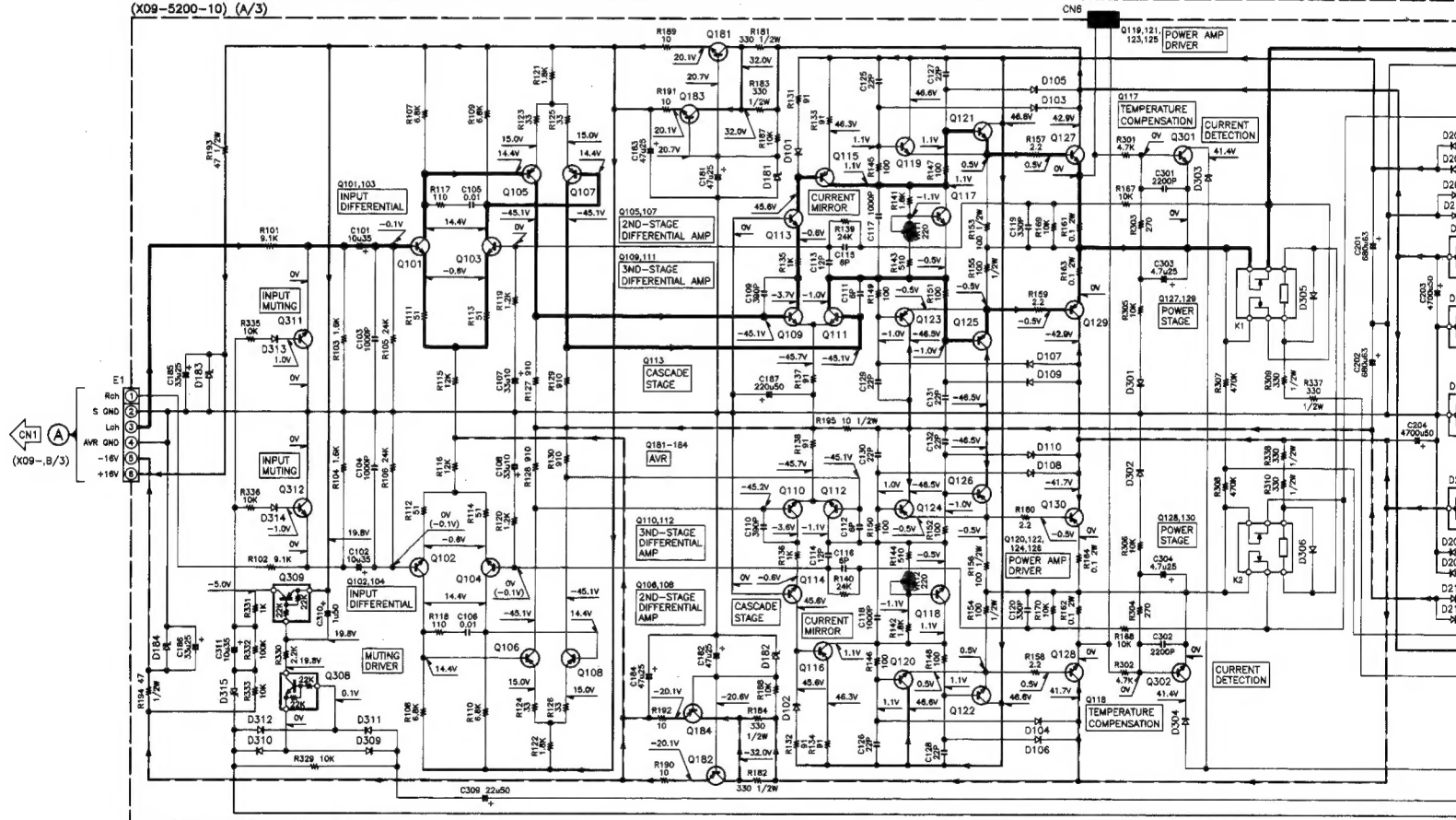
AUDIO UNIT (X09-5200-10)



(X09-5200-10) (B/3)



(X09-5200-10) (A/3)



2SA1123
2SA1534A
2SA733(A)
2SA965
2SA992
2SC11845
2SC2235
2SC2631
2SC3940A
2SC945(A)

2SC2590

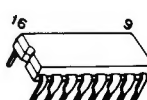
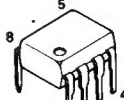
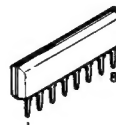
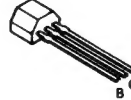
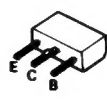
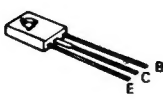
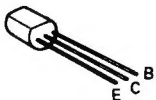
2SA1561

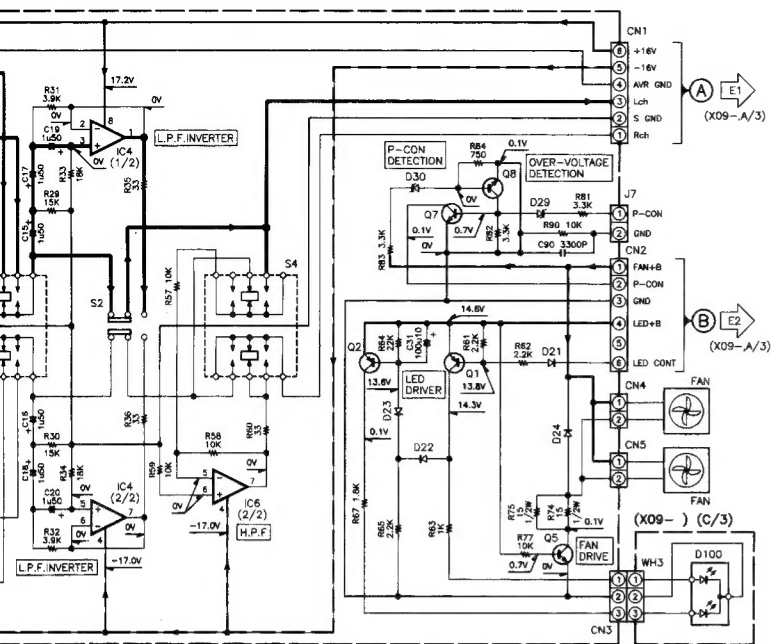
DTA124ESA
DTC124ESA

UPC1237HA

NJM4565D
NJM5532D

UPC494C



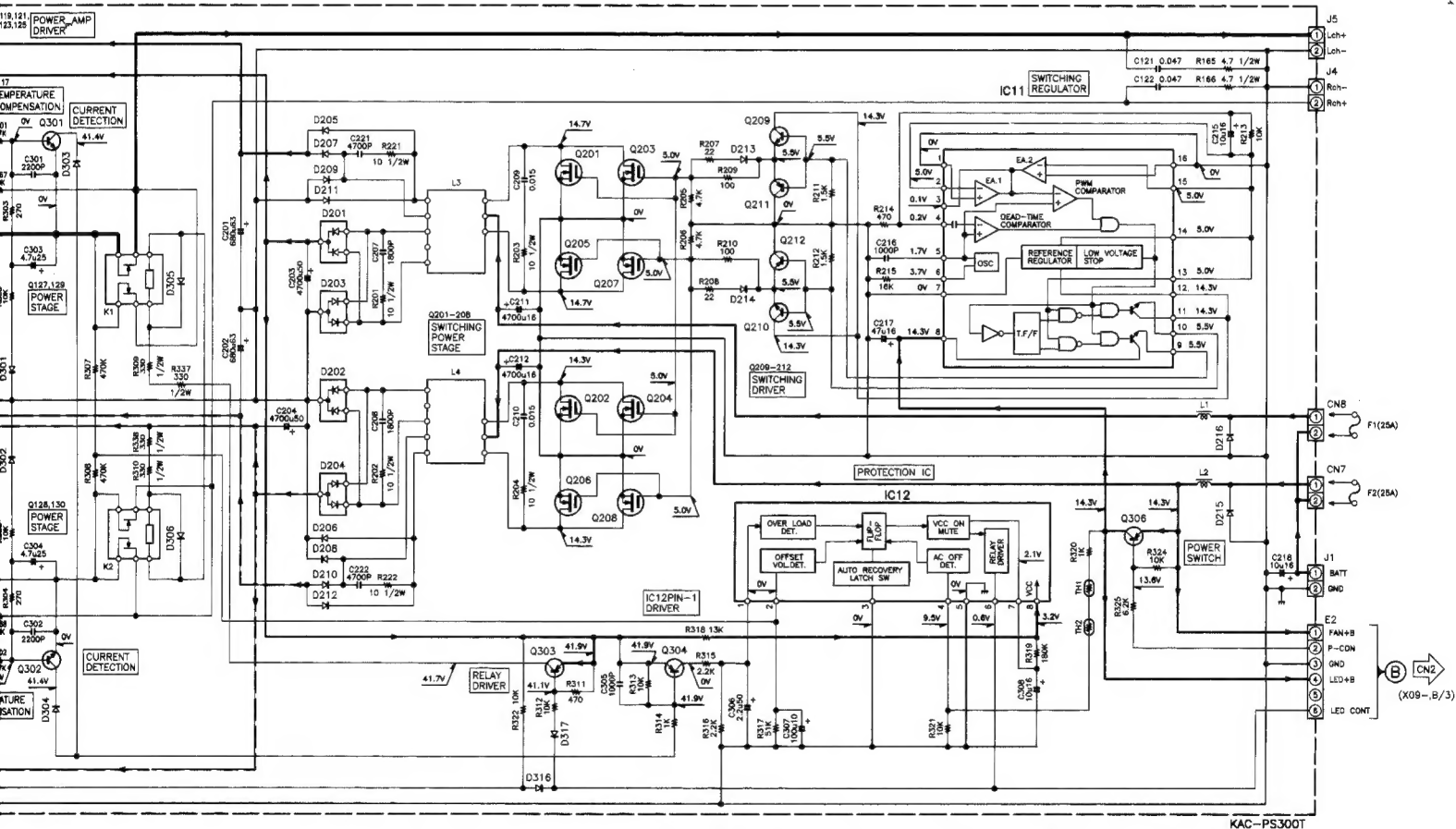


IC1-3 : NJM5532D
 IC4-6 : NJM4565D
 IC11 : UPC494C
 IC12 : UPC1237HA

Q1,2 : 2SA1561
 Q5,181,183 : 2SC3940A(R,S)
 Q7,8,101-104,209,210,311,312 : 2SC945(A)(Q,P)
 Q105-108,303,304 : 2SA992(F,E)
 Q109-114 : 2SC2631(Q,R)
 Q115,116 : 2SA1123(Q,R)
 Q117,118 : 2SC2590(Q,R)
 Q119-122 : 2SC2235
 Q123-126 : 2SA985
 Q127,128 : 2SC4886M5
 Q129,130 : 2SA1860M5
 Q182,184,306 : 2SA1534A(R,S)
 Q201-208 : IRFIZ48N
 Q211,212 : 2SA733(A)(Q,P)
 Q301,302 : 2SC1845(F,E)
 Q308 : DTC124ESA
 Q309 : DTA124ESA

D1-12,21-24,101,102,213,214,303-306,309-314,316,317 : MA165
 D13-16,103,110 : 1SS131
 D29 : RD7.5J5(B)
 D30 : RD15J5(B)
 D100 : B30-1384-05
 D181,182 : RD20J5(B)
 D183,184 : RD16J5(B)
 D201,202 : D10LC20J
 D203,204 : D10LC20R
 D205-212 : 1N4935
 D215,216 : 1N5406-M
 D301,302 : 1S2076A
 D315 : RD5.1J5(B)

— SIGNAL LINE
 — GND LINE
 — +B LINE
 - - -B LINE



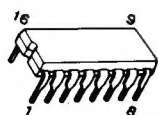
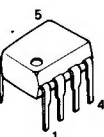
KAC-PS300T

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

JM4565D
 JM5532D

UPC494C

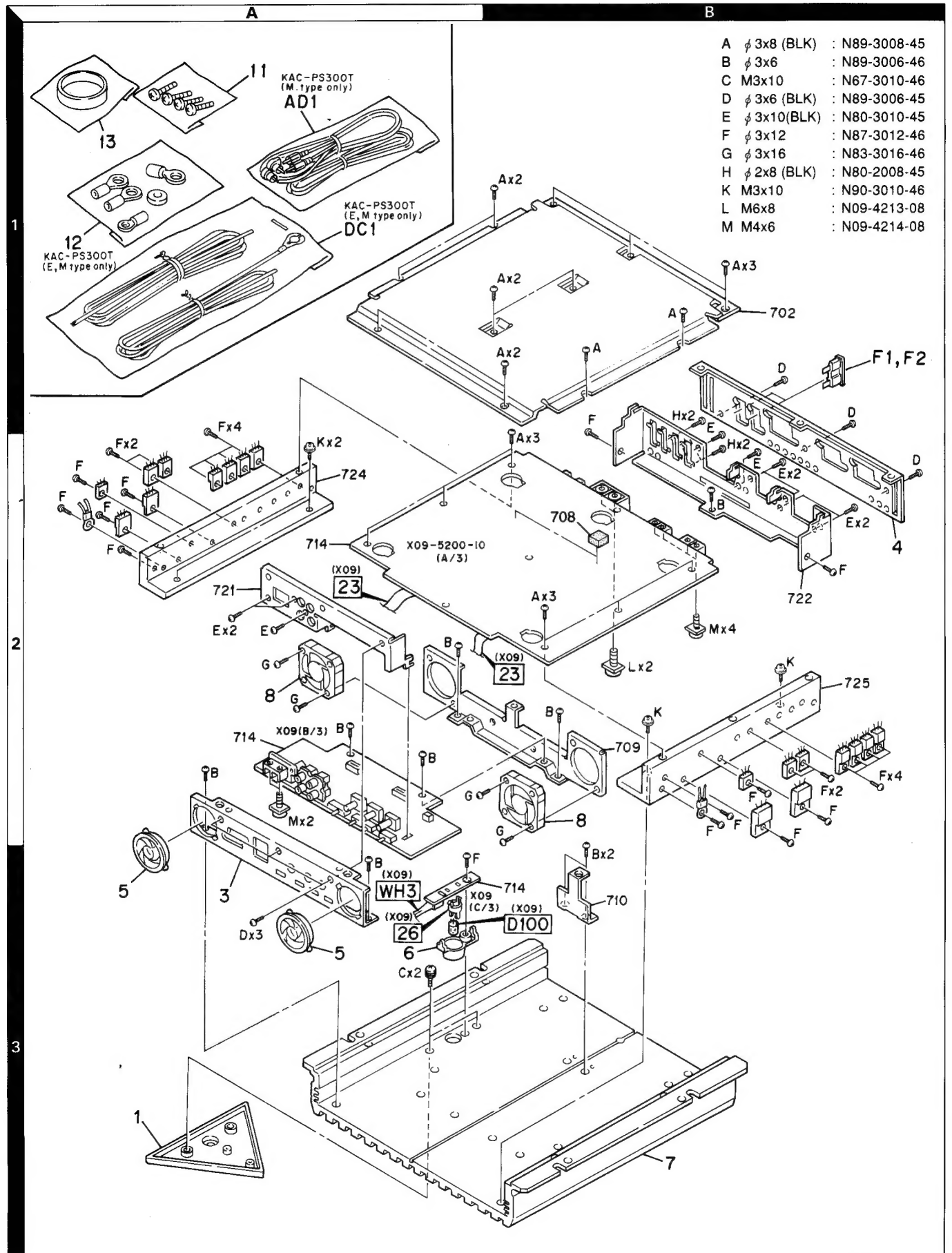


KAC-PS300T/927

KENWOOD

KAC-PS300T/927

EXPLODED VIEW



KAC-PS300T/927

PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向
KAC-PS300T/927				
1	3A	A21-2361-03	DRESSING PANEL (KAC-PS300T)	KE1M1
1	3A	A21-2362-03	DRESSING PANEL (KAC-927)	K1
3	3A	A64-1066-02	PANEL	
4	2B	A84-0123-02	REAR PANEL	
5	3A	B07-2093-03	ESCUTCHEON	
6	3A	B19-1094-03	LIGHTING BOARD	
-		B46-0100-50	WARRANTY CARD	
-		B64-1000-00	INST. MANUAL (E,F,S) (KAC-PS300T)	K
-		B64-1001-00	INST. MANUAL (E,F,G,D,I,S,P)	E1
-		B64-1003-00	INST. MANUAL (E,F,S) (KAC-PS300T)	M1
-		B64-1017-00	INST. MANUAL (E,F,S) (KAC-927)	K1
AD1	1A	E30-4067-05	AUDIO CORD	M1
DC1	1A	E30-4323-15	DC CORD ASSY	E1M1
7	3B	F01-1518-01	HEAT SINK (KAC-PS300T)	KE1M1
7	3B	F01-1519-01	HEAT SINK (KAC-927)	K1
8	2A	F09-1243-05	FAN	
F1	1B	F05-2531-05	FUSE (25A)	
-		H12-2611-04	PACKING FIXTURE	
-		H12-2612-03	PACKING FIXTURE	
-		H13-1684-14	CARTON BOARD	
-		H21-1117-04	PROTECTION SHEET	
-		H25-0336-04	PROTECTION BAG (170X250X0.03)	
-		H54-0797-03	ITEM CARTON CASE (KAC-PS300T)	KE1M1
-		H54-0800-03	ITEM CARTON CASE (KAC-927)	K1
11	1A	N99-1577-15	SCREW SET	
A	1A	N89-3008-45	BINDING HEAD TAPTITE SCREW	
B	3B	N89-3006-46	BINDING HEAD TAPTITE SCREW	
C	3A	N67-3010-46	PAN HEAD SENS SCREW	
D	1B	N89-3006-45	BINDING HEAD TAPTITE SCREW	
F	3A	N87-3012-46	BRAZIER HEAD TAPTITE SCREW	
G	2A	N83-3016-46	PAN HEAD TAPTITE SCREW	
K	2B	N90-3010-46	PAN HEAD MACHINE SCREW	
12	1A	W01-0746-05	ACCESSORY	E1M1
13	1A	W01-0747-05	ACCESSORY	
AUDIO UNIT (X09-5200-10)				
D100	3B	B30-1384-05	LED (GRN)	
C1 -4		CK45FB1H102K	CERAMIC 1000PF K	
C5 -8		CE04DW1V100M	ELECTRO 10UF 35WV	
C9 -12		CC45FSL1H220J	CERAMIC 22PF J	
C13 ,14		CC45FCH1H150J	CERAMIC 15PF J	
C15 -20		CE04DW1H010M	ELECTRO 1.0UF 50WV	
C21 ,22		CE04DW1V100M	ELECTRO 10UF 35WV	
C23 ,24		CF92FV1H104J	MF-C 0.10UF J	
C25 ,26		CF92FV1H224J	MF-C 0.22UF J	
C27		CE04DW1H0R1M	ELECTRO 0.1UF 50WV	
C28		CF92FV1H473J	MF-C 0.047UF J	
C29		CE04DW1H0R1M	ELECTRO 0.1UF 50WV	
C30		CE04DW1V100M	ELECTRO 10UF 35WV	
C31		CE04DW1A101M	ELECTRO 100UF 10WV	
C51 ,52		CK45FF1H103Z	CERAMIC 0.010UF Z	

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向
C90		CF92FV1H332J	MF-C 3300PF J	
C91		CF92FV1H102J	MF-C 1000PF J	
C101,102		CE04DW1V100M	ELECTRO 10UF 35WV	
C103,104		CK45FB1H102K	CERAMIC 1000PF K	
C105,106		CF92FV1H103J	MF-C 0.010UF J	
C107,108		CE04DW1A330M	ELECTRO 33UF 10WV	
C109,110		CK45FB1H391K	CERAMIC 390PF K	
C111,112		CC45FSL1H060D	CERAMIC 6.0PF D	
C113,114		CC45FSL1H120J	CERAMIC 12PF J	
C115,116		CC45FSL1H060D	CERAMIC 6.0PF D	
C117,118		CF92FV1H102J	MF-C 1000PF J	
C119,120		CC45FSL1H331J	CERAMIC 330PF J	
C121,122		CF92FV1H473J	MF-C 0.047UF J	
C125-132		CC45FSL1H220J	CERAMIC 22PF J	
C181,184		CE04DW1E470M	ELECTRO 47UF 25WV	
C185,186		CE04DW1E330M	ELECTRO 33UF 25WV	
C187		CE04DW1H221M	ELECTRO 220UF 50WV	
C201,202		C90-2916-05	ALUMINIUM ELECTROLYTIC C.	
C203,204		C90-2920-05	ALUMINIUM ELECTROLYTIC C.	
C207,208		CF92FV1H182J	MF-C 1800PF J	
C209,210		CF92FV1H153J	MF-C 0.015UF J	
C211,212		C90-2919-05	ELECTRO 4700UF 16WV	
C215		CE04DW1C100M	ELECTRO 10UF 16WV	
C216		CF92FV1H102J	MF-C 1000PF J	
C217		CE04DW1C470M	ELECTRO 47UF 16WV	
C218		CE04DW1C100M	ELECTRO 10UF 16WV	
C221,222		CF92FV1H472J	MF-C 4700PF J	
C301,302		CF92FV1H222J	MF-C 2200PF J	
C303,304		CE04DW1E477M	ELECTRO 4.7UF 25WV	
C305		CF92FV1H102J	MF-C 1000PF J	
C306		CE04DW1H2R2M	ELECTRO 2.2UF 50WV	
C307		CE04DW1A101M	ELECTRO 100UF 10WV	
C308		CE04DW1C100M	ELECTRO 10UF 16WV	
C309		CE04DW1H220M	ELECTRO 22UF 50WV	
C310		CE04DW1H010M	ELECTRO 1.0UF 50WV	
C311		CE04DW1V100M	ELECTRO 10UF 35WV	
23	2A	E31-8220-05	LEAD WIRE	
CN1 ,2		E40-9474-05	FLAT CABLE CONNECTOR	
CN3		E40-3247-05	PIN ASSY	
CN4 ,5		E40-3246-05	PIN ASSY	
CN6		E40-3881-05	SOCKET FOR PIN ASSY	
J1		E70-0804-05	SCREW TERMINAL BOARD	
J4 ,5		E20-0239-05	SCREW TERMINAL BOARD (2P)	
J6		E63-0804-05	PHONE JACK	
J7		E70-0810-05	SCREW TERMINAL BOARD	
WH3		E31-8296-15	WIRING HARNESS	
26	3B	J19-4459-04	LED HOLDER	
CN7 ,8		J13-0602-05	FUSE HOLDER	
L1 ,2		L33-1015-05	CHOKE COIL	
L3 ,4		L19-0559-05	TRANSFORMER FOR CONVERTER	
A	2A	N89-3008-45	BINDING HEAD TAPTITE SCREW	
E	2B	N80-3010-45	PAN HEAD TAPTITE SCREW	
F	2B	N87-3012-46	BRAZIER HEAD TAPTITE SCREW	

E: Europe K: North America M: Other Areas
W: Without Europe

⚠ indicates safety critical components.

PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles sans mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

AUDIO UNIT (X09-5200-10)

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向
H	2B		N80-2008-45	PAN HEAD TAPTITE SCREW	
L	2B		N09-4213-08	SEMS	
M	2B		N09-4214-08	SEMS	
R74 ,75			RD14DB2H150J	SMALL-RD 15 J 1/2W	
R153-156			RD14DB2H101J	SMALL-RD 100 J 1/2W	
R161-164			R92-0205-05	METAL-PLATE 0.1 K 2W	
R165,166			RD14DB2H4R7J	SMALL-RD 4.7 J 1/2W	
R181-184			RD14DB2H331J	SMALL-RD 330 J 1/2W	
R193,194			RD14DB2H470J	SMALL-RD 47 J 1/2W	
R195			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R201-204			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R221,222			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R309,310			RD14DB2H331J	SMALL-RD 330 J 1/2W	
R337,338			RD14DB2H331J	SMALL-RD 330 J 1/2W	
VR1			R31-0214-05	VARIABLE RESISTOR	
VR2 ,3			R31-0215-05	VARIABLE RESISTOR	
VR11,12			R12-0092-05	TRIMMING POT.(220)	
K1 ,2			S76-0804-05	MAGNETIC RELAY	
S1			S62-0853-05	SLIDE SWITCH	
S2			S62-0842-05	SLIDE SWITCH	
S3 ,4			S31-2630-05	SLIDE SWITCH	
D1 -12			MA165	DIODE	
D13 -16			1SS131	DIODE	
D21 -24			MA165	DIODE	
D29			RD7.5JS(B)	ZENER DIODE	
D30			RD15JS(B)	ZENER DIODE	
D101,102			MA165	DIODE	
D103-110			1SS131	DIODE	
D181,182			RD20JS(B)	ZENER DIODE	
D183,184			RD16JS(B)	ZENER DIODE	
D201,202			D10LC20U	DIODE	
D203,204			D10LC20UR	DIODE	
D205-212			1N4935	DIODE	
D213,214			MA165	DIODE	
D215,216			1N5406-M	DIODE	
D301,302			1S2076A	DIODE	
D303-306			MA165	DIODE	
D309-314			MA165	DIODE	
D315			RD5.1JS(B)	ZENER DIODE	
D316,317			MA165	DIODE	
IC1 -3			NJM5532D	IC(OP AMP X2)	
IC4 -6			NJM4565D	IC(OP AMP X2)	
IC11			UPC494C	IC(SWITCHING REGULATOR)	
IC12			UPC1237HA	IC(POWER AMP)	
Q1 ,2			2SA1561	TRANSISTOR	
Q5			2SC3940A(R,S)	TRANSISTOR	
Q7 ,8			2SC945(A)(Q,P)	TRANSISTOR	
Q101-104			2SC945(A)(Q,P)	TRANSISTOR	
Q105-108			2SA992(F,E)	TRANSISTOR	
Q109-114			2SC2631(Q,R)	TRANSISTOR	
Q115,116			2SA1123(Q,R)	TRANSISTOR	
Q117,118			2SC2590(Q,R)	TRANSISTOR	
Q119-122			2SC2235	TRANSISTOR	
Q123-126			2SA965	TRANSISTOR	

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向
Q127,128			2SC4886*5	TRANSISTOR	
Q129,130			2SA1860*5	TRANSISTOR	
Q181			2SC3940A(R,S)	TRANSISTOR	
Q182			2SA1534A(R,S)	TRANSISTOR	
Q183			2SC3940A(R,S)	TRANSISTOR	
Q184			2SA1534A(R,S)	TRANSISTOR	
Q201-208			IRFI248N	FET	
Q209,210			2SC945(A)(Q,P)	TRANSISTOR	
Q211,212			2SA733(A)(Q,P)	TRANSISTOR	
Q301,302			2SC1845(F,E)	TRANSISTOR	
Q303,304			2SA992(F,E)	TRANSISTOR	
Q306			2SA1534A(R,S)	TRANSISTOR	
Q308			DTC124ESA	DIGITAL TRANSISTOR	
Q309			DTA124ESA	DIGITAL TRANSISTOR	
Q311,312			2SC945(A)(Q,P)	TRANSISTOR	
TH1 ,2			PTH9M04BE222T	POSITIVE RESISTOR	

E: Europe K: North America M: Other Areas
W: Without Europe

⚠ indicates safety critical components.

KAC-PS300T/927

SPECIFICATIONS

Specifications subject to change without notice.

KAC-PS300T

Audio Section

Max Power Output (4 Ω)	
Normal	200 W \times 2
Bridged	800 W \times 1
Rated Power Output (4 Ω) (12 V)	
Normal (20 Hz ~ 20 kHz 0.05 % THD)	75 W \times 2
Bridged (1 kHz 0.5 % THD)	300 W \times 1
Rated Power Output (2 Ω) (12 V)	
Normal (1 kHz, 0.5 % THD)	150 W \times 2
Rated Power Output (4 Ω) (14.4 V)	
Normal (20 Hz ~ 20 kHz 0.05 % THD)	100 W \times 2
DIN : 45324 +B=14.4 V	100 W \times 2
(E type)	
Bridged (1 kHz 0.5 % THD)	400 W \times 1
Rated Power Output (2 Ω) (14.4 V)	
Normal (1 kHz, 0.5 % THD)	200 W \times 2
Frequency Response (+0, -1 dB)	5 Hz ~ 50 kHz
Sensitivity (rated output) (MAX.)	0.2 V
(MIN.)	5.0 V
Signal to Noise Ratio	105 dB
Input Impedance	10 k Ω
Damping Factor (100 Hz)	More than 200
Low Pass Filter Frequency	50 ~ 200 Hz (18 dB/oct)
Hi Pass Filter Frequency	50 ~ 200 Hz (12 dB/oct)

General

Operating Voltage	12.0 V (11 ~ 16 V allowable)
Current Consumption	32 A
Dimensions (W \times H \times D)	272 \times 58 \times 300 mm
	(10-11/16 \times 2-5/16 \times 11 ~ 13/16 in.)
Weight	4.9 kg (8.6 lb)

Specifications subject to change without notice.

KAC-927

Audio Section

Max Power Output (4 Ω)	
Normal	250 W \times 2
Bridged	800 W \times 1
Rated Power Output (4 Ω) (14.4 V)	
Normal (20 Hz ~ 20 kHz 0.08 % THD)	85 W \times 2
Bridged (1 kHz 0.8 % THD)	300 W \times 1
Rated Power Output (2 Ω) (14.4 V)	
Normal (1 kHz, 0.8 % THD)	160 W \times 2
Frequency Response (+0, -1 dB)	5 Hz ~ 50 kHz
Sensitivity (rated output) (MAX.)	0.2 V
(MIN.)	5.0 V
Signal to Noise Ratio	105 dB
Input Impedance	10 k Ω
Damping Factor (100 Hz)	More than 200
Low Pass Filter Frequency	50 ~ 200 Hz (18 dB/oct)
Hi Pass Filter Frequency	50 ~ 200 Hz (12 dB/oct)

General

Operating Voltage	12.0 V (11 ~ 16 V allowable)
Current Consumption	39 A
Dimensions (W \times H \times D)	272 \times 58 \times 300 mm
	(10-11/16 \times 2-5/16 \times 11 ~ 13/16 in.)
Weight	4.9 kg (8.6 lb)

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